PROPOSED NEW WORK DREDGING
BALTIMORE HARBOR AND CHANNELS,
MARYLAND AND VIRGINIA
STRAIGHTENING OF THE
TOLCHESTER CHANNEL S-TURN, MARYLAND

1.0 INTRODUCTION

This Environmental Assessment (EA) addresses the environmental impacts of the proposed straightening of the existing 35-foot deep mean lower low water (MLLW) Tolchester Channel S-Turn.

The Baltimore District, U.S. Army Corps of Engineers (USACE), maintains the Baltimore Harbor and Channels, 42- and 50-Foot Federal navigation projects. The River and Harbor (R&H) Act of 3 July 1958 authorized the deepening of the main approach channels to Baltimore Harbor from 39 to 42 feet and the deepening and widening of the connecting channels to the Chesapeake and Delaware (C&D) Canal from 27 to 35 feet deep and from 400 to 600 feet wide. The connecting channels are comprised of the Brewerton Channel Eastern Extension, Tolchester Channel, and Swan Point Channel. All improvements to the Baltimore Harbor & Channels project authorized by the R&H Act of 1958 are complete except widening of the western five miles of the Brewerton Channel Eastern Extension from 450 feet wide to 600 feet wide. Widening of the Brewerton Channel Eastern Extension is scheduled for completion in June 2001. Section 329 of the Water Resources Development Act (WRDA) of 1999 directed the Secretary of the Army to straighten the Tolchester Channel S-Turn as part of the project maintenance.

The Tolchester Channel is authorized to 35 feet deep and 600 feet wide. The channel was constructed to 35 feet deep and 450 feet wide in 1968, and was widened to 600 feet in 1981. The turns were widened beyond 600 feet for navigation safety. The Tolchester Channel, which follows the naturally deep water on the eastern side of the Chesapeake Bay, comes within 1,000 feet of the shoreline south of Tolchester Beach. The channel changes direction four times in this region creating what is called the "S-Turn," which requires pilots to make three to five course changes within a distance of three miles. The turns were widened during the channel widening in 1981, and again in 1992 to improve navigation safety. The turns range from 1,020 to 1,250 feet wide. The Association of Maryland Pilots (AMP) indicates that the combination of three to five course changes within a 3-mile section of channel; the channel coming within 1,000 feet of the shoreline; and the periodic adverse weather conditions, such as high winds, fog, ice, and thunderstorms, make navigation of the S-Turn difficult.

The proposed action in this Environmental Assessment (EA) is to realign and straighten the Tolchester Channel S-Turn. The purpose of the project is to increase navigation safety and efficiency for vessels transiting between the C&D Canal and the Port of Baltimore. The project will require the dredging of approximately three million cubic yards of material, including two feet of advanced maintenance dredging and two feet of

allowable overdepth dredging. The State of Maryland has designated the Poplar Island Environmental Restoration project or the Hart-Miller Island Containment Facility for the placement of the dredged material. Annual shoaling is expected to be reduced by approximately 23 percent, or 43,000 cubic yards per year, as a result of the channel straightening.

The proposed methods of dredging the Tolchester Channel S-Turn and the placement of material are addressed and supported in, and are consistent with, the Final Environmental Impact Statement and accompanying Supplemental Information–Operation & Maintenance of Baltimore Harbor & Associated Channels, Maryland & Virginia, filed with the Council on Environmental Quality on 10 January 1975, and 9 January 1976, respectively; the Final Environmental Impact Statement for the Hart Miller Island Diked Disposal Area, filed with the U.S. Environmental Protection Agency (USEPA) in 1974; the Final Environmental Impact Statement−Proposed Plan for Completing the Navigation Improvements, Authorized by the 1958 River and Harbor Act for the Baltimore Harbor and Channels, Maryland and Virginia, filed with USEPA on 21 November 1979; and the Final Poplar Island, Maryland Environmental Restoration Project, Integrated Feasibility Report and Environmental Impact Statement filed with USEPA in 1996. The above-cited environmental documentation is incorporated by reference into this EA. The same environmental documentation is available from USACE, Baltimore District, CENAB-PL-C, P.O. Box 1715, Baltimore, MD 21203-1715.

This EA was prepared in accordance with the provisions of the National Environmental Policy Act (NEPA), Council on Environmental Quality Regulations (40 CFR 1500-1508), and USACE Regulations (33 CFR 230), "Procedures for Implementing NEPA.

1.1 PURPOSE AND NEED FOR THE PROPOSED ACTION

The Tolchester Channel is a key link in the channel system leading from the Port through the Chesapeake and Delaware (C&D) Canal. The State of Maryland, Maryland Port Administration (MPA), and the AMP request that the Tolchester Channel S-Turn be straightened to provide safe navigation. The requests are included among the public comments on the project and are included in Appendix I. The U.S. Coast Guard supports the proposed straightening as indicated in its letters included in Appendix I and indicated that the S-Turn is one of the most difficult navigation challenges in the U.S. Coast Guard Fifth District. The AMP indicates that the combination of three to five course changes within a three-mile section of channel; the channel coming within 1,000 feet of the shoreline; and the periodic adverse weather conditions, such as high winds, fog, ice, and thunderstorms, make navigation of the S-Turn difficult and involve greater risks of groundings. Three groundings occurred in the S-Turn between 1983 and 1991 and an additional three groundings occurred in the immediate vicinity of the S-Turn between 1981 and 1986. U.S. Coast Guard records do not indicate that there have been any accidents or groundings in the Tolchester Channel S-Turn since 1994. The Association of Maryland Pilots continues to indicate that close calls and near misses occur while navigating the S-Turn.

The project is not economically justified (the benefit to cost ratio for the project is less than 1:1). However, sment conducted as a directive of the Congress directed the Corps of Engineers to straighten the Tolchester Channel S-Turn in the Water Resources and Development Act (WRDA) of 1999.

1.2 AUTHORITY

The River and Harbor (R&H) Act of 3 July 1958 authorized the deepening of the main approach channels to Baltimore Harbor from 39 to 42 feet, and the deepening and widening of the connecting channels to the C&D Canal from 27 to 35 feet deep and from 400 to 600 feet wide. The connecting channels are comprised of the Brewerton Channel Eastern Extension, Tolchester Channel, and Swan Point Channel. In addition, the Act authorized maintenance of a 39-foot depth in the Northwest Branch, provided that local interests first deepen the channels to that depth. All of the improvements to the Baltimore Harbor & Channels project authorized by the 1958 Act have been constructed with the exception of widening the western 5 miles of the Brewerton Channel Eastern Extension from 450 to 600 feet. A contract to widen the Brewerton Channel Eastern Extension was awarded in August 2000. Dredging is expected to begin in March 2001 and to be completed in June 2001.

The legislative authority for straightening the Tolchester Channel S-Turn is provided by Section 327 of the WRDA of 1996, which states: "The project for navigation, Baltimore Harbor and Channels, Maryland, authorized by section 101 of the River and Harbor Act of 1958 (72 Stat. 297), is modified to direct the Secretary - (1) to expedite review of potential straightening of the channel at the Tolchester Channel S-Turn; and (2) if determined to be feasible and necessary for safe and efficient navigation, to implement such straightening as part of project maintenance." The U.S. Army Corps of Engineers (USACE), Baltimore District, conducted a navigation study of the proposed action, which recommended straightening of the Tolchester Channel S-Turn to improve navigation safety. Section 329 of the WRDA of 1999 further modifies Section 101 of the R&H Act of 1958 to "direct the Secretary to straighten the Tolchester Channel S-turn as part of project maintenance."

1.3 PROJECT AREA

The Tolchester Channel S-Turn is located approximately 20 miles east of Baltimore and comes within 1,000 feet of the shoreline just south of Tolchester Beach on the Eastern Shore of Maryland (Kent County). The Poplar Island Environmental Restoration Project is located approximately 34 miles southeast of Baltimore and one mile northwest of Tilghman Island (Talbot County). The Hart-Miller Island (HMI) Containment Facility is located at the mouth of Back River (Baltimore County), approximately 14 miles east of Baltimore, and six miles west of the Eastern Shore of Maryland. Figure 1-1 is a map of the proposed dredging and placement areas. Figure 1-2 shows the project location and the route from the C&D Canal. Figure 1-3 is a detailed drawing of the HMI Containment Facility. Figure 1-4 shows the location of the Poplar Island project, which is near the

town of Saint Michael's on Maryland's Eastern Shore, approximately 32 miles south of the Tolchester Channel.

For purposes of this EA, the channel impact area is considered to be the existing S-Turn, the proposed new channel alignment, and an area within approximately two miles in all directions. This includes Tolchester Beach. The area of influence for the placement sites includes the actual placement facility and the near-field open-water areas, approximately one-half mile in each direction, unless otherwise specified.

US Army Corps
of Engineers
Baltimore District

Figure 1-1 Baltimore Harbor & Channels, Tolchester S-Turn, and Placement areas

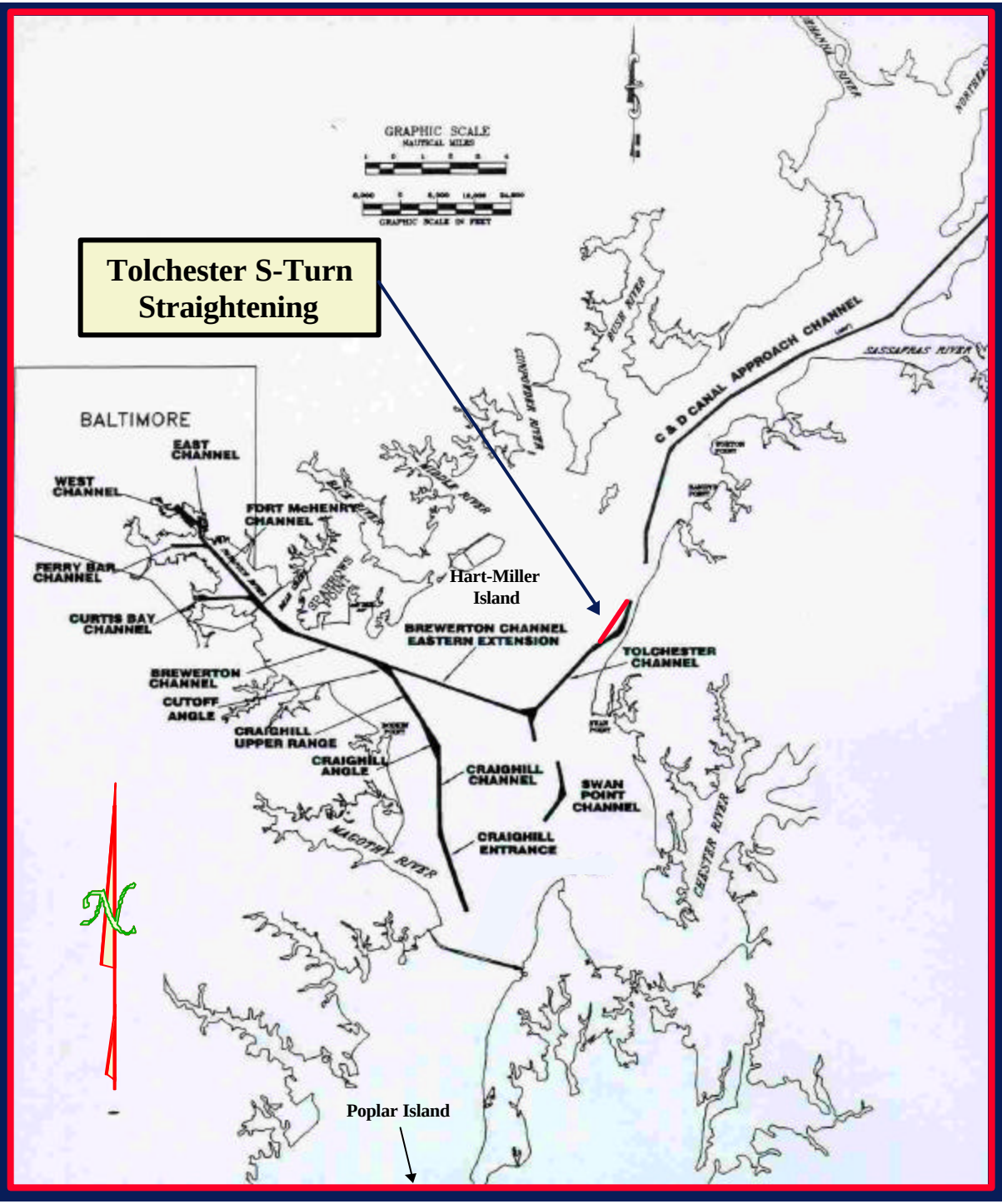
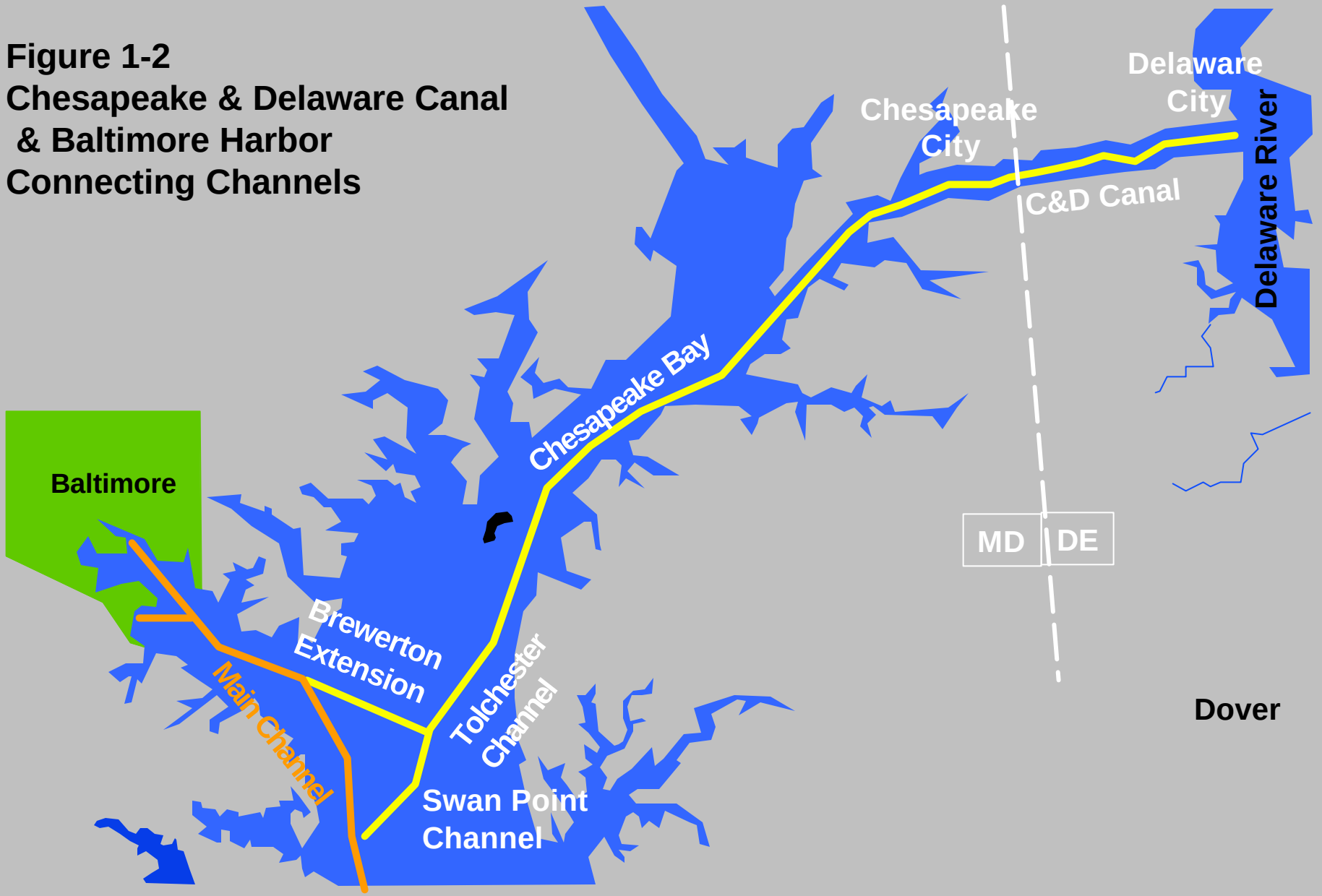
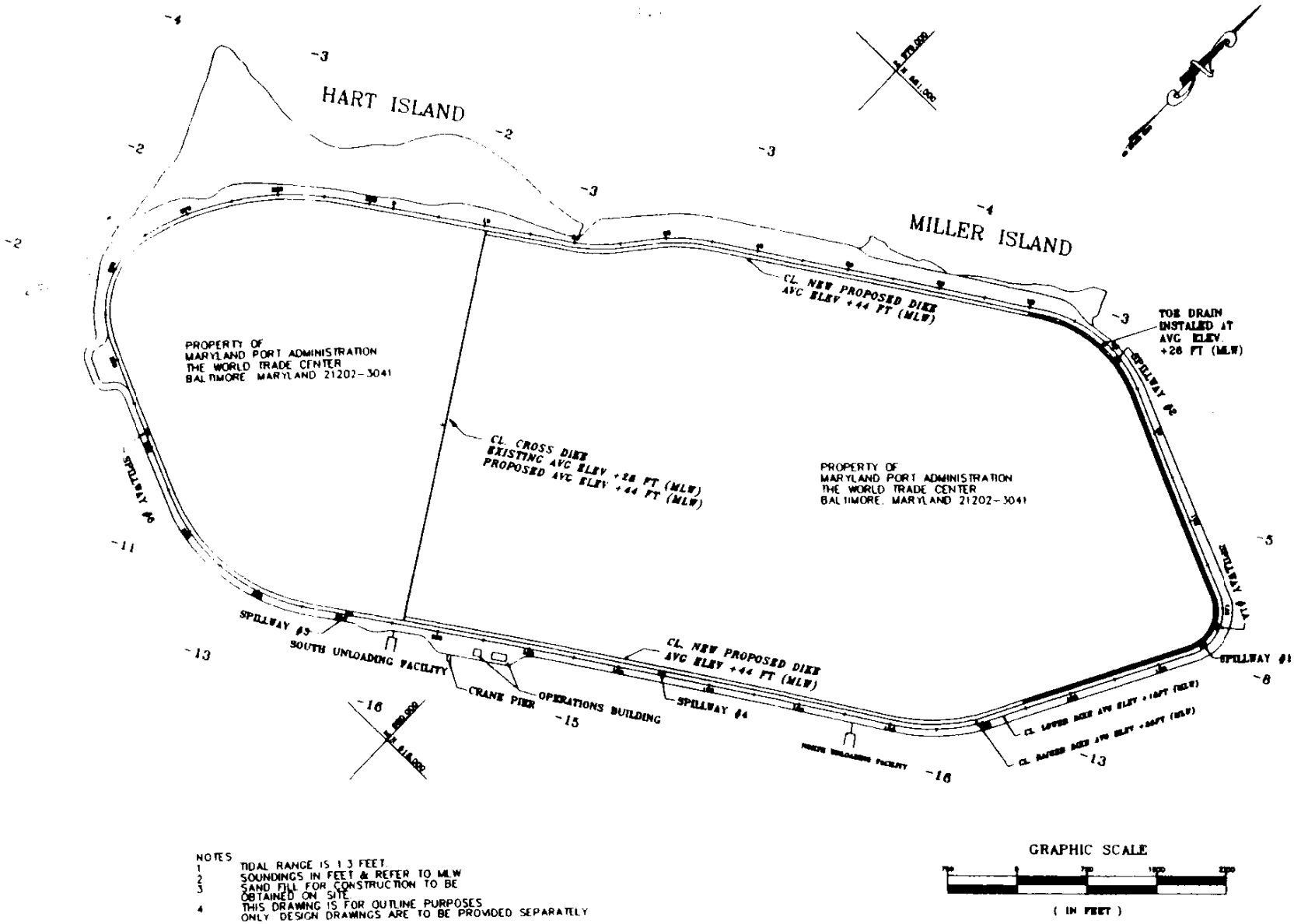


Figure 1-2
Chesapeake & Delaware Canal & Baltimore Harbor Connecting Channels



27 January 2000



NOTES
1. TIDAL RANGE IS 1.3 FEET.
2. SOUNDINGS IN FEET & REFER TO MLW
3. SAND FILL FOR CONSTRUCTION TO BE OBTAINED ON SITE.
4. THIS DRAWING IS FOR OUTLINE PURPOSES ONLY. DESIGN DRAWINGS ARE TO BE PROVIDED SEPARATELY.

GRAPHIC SCALE

(IN FEET)

MARYLAND PORT ADMINISTRATION

MARYLAND ENVIRONMENTAL SERVICE

IN: CHESAPEAKE BAY
NEAR: MOUTH OF BACK RIVER, BALTIMORE CO.
APPL. BY: MARYLAND PORT ADMINISTRATION
DATE: MARCH 27, 1996
ENCLOSURE 1 SHEET 2 OF 4

Figure 1-3. Hart-Miller Island Containment Facility.

Figure 1-4.
Location of Poplar Island Environmental Restoration Project, Talbot County, MD